



**3<sup>rd</sup> International Conference  
on Public Policy (ICPP3)  
June 28-30, 2017 – Singapore**

**Panel T05P06**

*Challenges in Global Policy Making : the 'Practice Turn' in the New  
Diplomacy*

**Title of the paper**

*The Practice of Science Diplomacy studied from the Positioning  
Theory angle*

**Author(s)**

*Luk Van Langenhove, Vrije Universiteit Brussel, Belgium,  
[luk.van.langenhove@vu.be](mailto:luk.van.langenhove@vu.be)*

*Melanie James, University of Newcastle, Australia,  
[melanie.james@newcastle.edu.au](mailto:melanie.james@newcastle.edu.au)*

**Date of presentation: 29 June 20**

## The practice of Science Diplomacy studied from the Positioning Theory angle

Luk Van Langenhove<sup>1</sup> and Melanie James<sup>2</sup>

**3rd INTERNATIONAL CONFERENCE ON PUBLIC POLICY, SINGAPORE 28th June to Friday 30th June 2017.**

***Paper presented at panel T05P06: Challenges in Global Policy Making: the 'Practice Turn' in the New Diplomacy. This paper is written as part of the EL-CSID project that has received funding from the European Union's Horizon 2020 research and innovation program under grant agreement No 693799. The paper reflects only the authors' view, and the Research Executive Agency is not responsible for any use that may be made of the information it contains.***

### **Abstract**

*This paper introduces the use of Positioning Theory (Positioning Theory) as an analytical framework for the empirical study Science Diplomacy (Science Diplomacy). It presents a linguistic and discursive analysis of the concept of Science Diplomacy, using Positioning Theory as a lens. It will be argued that Science Diplomacy is not just a 'concept' used by different stakeholder groups to mobilize human and financial resources, but that Science Diplomacy is also a 'practice'. Science Diplomacy needs to be seen as just one way among a suite of others to enhance the potential positive influence of science on society. The paper starts with a discussion of the polysemous nature of the concepts of Science Diplomacy. It will be argued that Science Diplomacy is both a practice and a label given to certain public policies and therefore qualifies as a social construct. Next, Positioning Theory is presented as a highly appropriate lens through which to examine the social construct of Science Diplomacy. Within psychology, Positioning Theory emerged as a modification of role theory. The core of Positioning Theory is the mutually determining relations between positions, speech acts and storylines. Positioning Theory has been widely used in a variety of disciplines within the social sciences and humanities, including the study of public relations/strategic communication. It will be argued that Positioning Theory offers an interesting perspective to the study of Science Diplomacy. This is because it allows for the study of what counts as Science Diplomacy practices but also distinguishes this aspect from how states and public policy actors wield the rhetorical power of Science Diplomacy in the pursuit of their self-interests.*

---

<sup>1</sup> Vrije Universiteit Brussel, Institute for European Studies. Contact: luk.van.langenhove@vub.be

<sup>2</sup> University of Newcastle, Australia. Contact: melanie.james@newcastle.edu.au

## **1. The social construction of Science Diplomacy.**

This section starts with a brief overview of the emergence of Science Diplomacy as both a practice and a concept used by policy-makers. Next, this historical evolution will be situated in the wider context of the changing social contract between science and society. Finally, the social constructionist nature of Science Diplomacy will be highlighted. This section paves the way for arguing why Positioning Theory is a suitable framework to study Science Diplomacy.

### ***1.1. Origins and spreading of the concept: from an unnamed practice to a policy label and onwards to a topic of research***

The notion of 'science diplomacy' has been occasionally used in scholarly writings since J. Nye introduced the notion of 'soft power' in 1990 to indicate that states can, next to their military and economic power, can also exert power through their cultural assets, including its science system. However, the 2002 special issue of the Science and Public Policy journal on globalization, science, technology and policy, does not yet mention the concept although Stein (2002, p. 406) addresses the issue of 'science, technology and diplomacy'. In that same special issue, Santos Pereira (2002) introduces the distinction between 'science for diplomacy' and 'science in diplomacy' but it does not use the concept 'Science Diplomacy'. It is only a decade later that the same journal started talking about 'Science Diplomacy' (cf. Flink and Schreiterer, 2010).

The academic interest for what is now called Science Diplomacy, came after decades of practices that involved scientists in international relations endeavors. Already in 1956, for instance, the US State department and its counterpart in the U.S.S.R. facilitated links between American and Soviet virologists, to collaborate in producing the oral polio vaccine (Swanson, 2012). There exist many other examples. But it is only in the first decennium of the 21<sup>st</sup> century that one can say that Science Diplomacy became regularly mentioned in policy documents and that the first studies on Science Diplomacy emerged. A key milestone was perhaps the 2009 statement of Hillary Clinton, then US Secretary of State, who stated that *"science diplomacy and science and technology and cooperation (...) is one of our most*

*effective ways of influencing and assisting other nations and creating real bridges between the United States and counterparts;*" (Quoted in Turekian et.al., 2015, p. 17). Another milestone has been the publication of the American Association for the Advancement of Science (AAAS) report in 2010 that set the scene by introducing three forms of Science Diplomacy: Science for Diplomacy, Science in Diplomacy, Diplomacy for Science. This typology thus places three distinct practices under one heading. It also paved the way for a wide acceptance of 'Science Diplomacy' as a policy concern. A year earlier, President Obama in his Cairo speech on 4 June 2009 had announced that the US would start sending science envoys to the Middle East and that the U.S. would seek a more comprehensive engagement with Muslim-majority countries, countries with significant Muslim populations, and their people by expanding partnerships in areas like education, economic development, science and technology, and health, among others, while continuing to work together to address issues of common concern. Since then, several developments have occurred that further contributed to the spread of the concept. Although this is not the place to present an exhaustive overview of these developments, five significant trends will be mentioned.

1.1.1 Several countries have started using the concept of Science Diplomacy when referring to their already existing international RTD policies such as support to exchange programs or the creation of posts of science attachés in embassies. As a result, there now exist several policy tools and instruments that are labeled as Science Diplomacy (see Van Langenhove, 2017, for an overview of such tools in Europe). More and more countries seem to be 'jumping on the bandwagon'. A recent example is the Netherlands.[\(details\)](#). Also, the EU, which is one of the biggest science funding authorities in the world, embraced the concept in its policy declarations regarding RTD and their 'open to the world' policy.

1.1.2 In some cases, diplomats or civil servants started being referred to as Science Diplomats. Also, in a limited set of cases, Foreign Affairs departments have begun to mention Science Diplomacy in their strategic documents.

1.1.3 Several research funding institutions started investing resources in the academic study of Science Diplomacy. AAAS created in 2008 The 'Centre of Science Diplomacy' and launched in 2011 a journal, "Science and Diplomacy", which has been published since 2012.

The EU launched several calls for research projects on Science Diplomacy. This has resulted in several international research projects such as MERID and EL-CSID.

1.1.4 A small but international community of scholars is emerging as a result of point 1.1.3 above).

1.1.5 A limited set of cases became labeled as practices of Science Diplomacy. Cf. SESAME, Malta initiative, Antarctica.

So, in recent years, while there has been a proliferation of the use of Science Diplomacy as a *policy concept* used by governmental science departments as well as Foreign Affairs departments, there are also a number of *practices* that are labeled as Science Diplomacy. Interestingly, this is also being done retrospectively and so some practices of the past that were not labeled as Science Diplomacy when they took place, are now staged as examples of Science Diplomacy. A classic example is the Soviet and American joint space explorations in the 1960s and 1970s. However, by and large the references to Science Diplomacy policies and practices remain limited and for the governmental actors involved, it is rarely central to their strategic objectives. Nevertheless, there are several advocates of Science Diplomacy that call for more efforts and that consider it as a valuable tool to achieve goals such as the earlier mentioned polio vaccine development.

## **1.2. The wider context: a changing social contract between science and society**

The background of the emergence of science diplomacy as a policy tool is rooted in the social contract between science and society that was presented in Vannevar Bush's 1945 report to the US President: *Science, The Endless frontier*. In that report, the message was conveyed that if society funds fundamental science without meddling with the science-agenda, science will give back to society useful knowledge and innovations (Bijker, 2017, p.321). Since then, this social contract has been changing and governments have been increasingly involved in steering science towards particular societal goals. Economic development through innovation has been the most prominent concern. More recently, the idea to mobilize science for tackling global problems has gained interest as well. Exemplar in

this respect is the present EU funding scheme, Horizon 2020 that takes on 'global societal challenges' such as health, food or climate change. Security and development too, became objects of policy concern for governmental science funding. Today, the societal relevance of science (and technology) is part of a new societal contract between science and society. This is reflected in the growing importance of data and evidence-based policy as well as in the emphasis of states to link their funding of science to the notion of innovation.

Within that context, it should not come as a surprise that foreign affairs and international relations policy, also became interested in the relation between science and world politics. For example, there has been a long-standing tradition of using science for military purposes, namely the contribution to the development of weapons, something that became increasingly important since the Second World War. Now the emphasis has broadened to the potentials of science to enhance peace, and with this, a shift in expectations from science has occurred. While the emphasis of the 'societal relevance' contract was originally on the use of *products* that are the results of science (often translated in innovations), the attention now goes to the benefits of the *process* of science international cooperation for achieving Foreign Affairs policy goals.

It is evident that for a long time science has been benefitting from international cooperation, with scientists having always organised themselves in transnational organisations and networks. However now the states are wondering to what extent international cooperation of scientists can help them in achieving their policy goals. To some extent this is reflected in the support of states given to international projects and exchanges. It also shows in the efforts of states to use their scientific resources as promotional material for projecting a country's reputation and influence. Science is as such becoming an object of strategic communication between states. On top of that, the mere fact of scientists being engaged in international cooperation is seen as something that can be beneficial to build trust between states and to build better relations between states that are engaged in disputes or conflicts. This echoes with ongoing changes in the nature of diplomacy.

### ***1.3. The social construction of science diplomacy***

The above brief analysis of the use of science diplomacy demonstrates that the concept qualifies to be considered as a social construct. It is a label used by stakeholders to talk about policies and practices. It therefore makes sense to link it to Social Constructionism, a group of theories that examine the development of jointly constructed understandings of the world that form the basis for shared assumptions about reality. The origins of this theoretical approach go back to the work of Berger and Luckmann (1966) and has since been applied in many social science disciplines. It is also linked to considerations about the ontology of the social reality (Searle, 1995).

There does not yet exist a fully developed theoretical approach to Science Diplomacy, let alone a social constructionist approach to its study. Given that Science Diplomacy is a topic that can be linked to science policy, public policy, diplomacy and international relations, there are different existing epistemic communities that would qualify as apt to consider Science Diplomacy a topic of interest. This would be the case in such communities as Public Policy Studies, the Sociology of Science field, diplomacy studies, IRT and others. However, Science Diplomacy is hardly a topic of concern in these fields of study yet. As a result, there are no extant theoretical and empirical lenses available to study Science Diplomacy.

It is Social Constructionism, whilst not a homogenous approach to the study of the social realm, that offers much potential as an epistemology within which to study Science Diplomacy. Under this social constructionist umbrella, there exists many different schools, theories and approaches, all of them with their merits and their critics. In this paper, one specific social constructionist theory, namely *Positioning Theory*, is advanced as a potential theoretical lens to study Science Diplomacy.

## **2. Introducing Positioning Theory**

Positioning Theory was first introduced in social sciences by Davies and Harré (1990). In that paper, positioning activities were regarded as constructs for the discursive production of selves, *whereby selves are located in conversations as observably and subjectively coherent participants in jointly produced storylines* (Davies and Harré, 1990, p.48). By presenting

positions, speech acts and storylines as ‘a mutually determining triad’, the concept of position became part of a theory that can be situated in the social constructionist movement in the social sciences (Berger and Luckmann, 1966) and the related narrative or Discursive Turn (Searle, 1995).

### **2.1. The basic aspects of Positioning Theory**

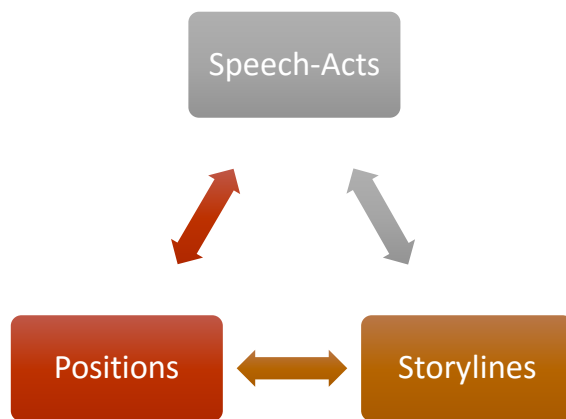
Harré and Van Langenhove (1991) presented the first systematic overview of the theory and introduced different conceptual refinements of the theory, such as the differences between first and second order positions, performative and accounting positioning, moral and personal positioning, self and other positioning and tacit and intentional positioning. In other articles, Positioning Theory was applied to a wide range of topics such as the understanding of stereotypes (Van Langenhove and Harré, 1994), autobiographical talk (Van Langenhove and Harré, 1993a) as well as the writing of scientific publications (Van Langenhove and Harré, 1993b). In 1999, a first edited volume appeared (Harré and Van Langenhove, 1999a) in which the application of Positioning Theory was further broadened to issues such as intergroup relations or national identities. In that same volume, Positioning Theory was advocated as *a starting point for reflecting upon the many different aspects of social life* (Harré and Van Langenhove, 1999d, p. 10). Indeed gradually, other authors referred to Positioning Theory as a framework for mostly social discourse analysis. Examples include the study of teacher-learner interactions, counselling practices, managerial changes processes, public relations policies and international relations. By 2008, Harré and his collaborators (see Moghaddam, Harré and Lee 2008) were able to claim that the Positioning Theory applications had undergone a very natural expansion of scale, from the analysis of the dynamics of person-to-person encounters to the unfolding of interactions between nation states. Indeed, one specific development has been the application of Positioning Theory to the fields of foreign policy analysis and international relations. Examples include: Slocum and Van Langenhove (2003); Slocum-Bradley (2008); and, Moghaddam and Harré (2010).

One of the key aspects of Positioning Theory is that it claims to be *a dynamic alternative to the more static concept of role*. In Harré and Van Langenhove (1999b, p. 196) this claim is



further developed by referring to the Johnsonian notion of determinables and determinants. Roles are determinants, positions are determinables. That is, 'a role' is to 'a position' as 'color' is to red'. Adopting or being assigned a role fixes only a range of positions, positions compatible with the role. Furthermore, the positions are linked to the unfolding of (conversational) interactions. It is based upon the idea that during conversational interactions, people use narratives or 'storylines' to make their words and actions meaningful to themselves and others.

*Figure 1 The Positioning Triad. Based on Harré and Van Langenhove (1991)*



Metaphorically, this can be thought of as agents presenting themselves and others as actors in a drama, with different 'positions' assigned to the players. In this theory, the term 'position' refers to 'the momentary clusters of rights and duties to speak and act in a certain way' (Van Langenhove, 2011, p. 67). In combination with the speech acts and the storylines<sup>3</sup> of a conversation, the positions form a mutually influencing triangle (see figure 1). 'Positions' in this context are characterized by the adoption of several theoretical devices by which a person and other speakers are presented as standing in various kinds of relations to each other. The positions are thus the parts being performed by the participants. Positions and the accompanying permissible repertoires of acts are linked to the storylines. The actions (including speech) of the participants are given meaning by the storyline and the

---

<sup>3</sup> Acts refer to the 'social meaning of actions' while storylines represent 'a loose cluster of narrative conventions according to which a social episode unfolds and positions arise' (Moghaddam, Harré, & Lee, 2008, pp. 293-4).

positioning of those involved. Being positioned in a certain way carries obligations or expectations about how to behave. Positions may also carry rights, such as the right to intervene or to speak. As such, Positioning Theory opens perspectives for detailed analyses of discourses and it is now widely used as an analytical tool to study all kinds of social situations.

The three constitutive elements of the positioning triangle – speech-acts, positions and storylines – reflect the necessary conditions for the meaningfulness of a flow of interactions. Speech-acts can have different meanings according to the context, for instance, the phrase ‘I am sorry’ can refer to an apology or can, in other contexts, be a request to repeat something that has just been said (Moghaddam, Harré & Lee, 2008, pp. 10-11). A *position* is the cluster of rights and duties that limits the possible social acts of an entity as it is positioned. It largely determines what an actor is entitled to say given his/her position. Traditions and customs are important sources in the constitution of positions (Moghaddam, Harré, & Lee, 2008, p. 11), what could be referred to as the local moral order in operation at specific times or in specific situations. The third corner of the triangle is occupied by the *storylines* which structure the flow of actions and interactions in a particular conversation. It relates the positions of two actors who exchange speech-acts to each other and creates a certain dynamic of these interactions. Sources of storylines can be histories, persistent media presentations or traditional plots. An example of a storyline is the discourse surrounding ‘good guys’ and ‘bad guys’. It is narratology which studies the origins of the storylines used in a certain culture (Moghaddam, Harré, & Lee, 2008, pp. 11-2). In the triangle metaphor, the elements mutually determine one another. The position – the presumptions of rights and duties – influences the meaning given to certain speech-acts, while the position and the speech-acts influence and are influenced by the storyline (Moghaddam, Harré, & Lee, 2008, p. 12).

## **2.2. The moral dimension of Positioning theory**

In Positioning Theory, this triad is used as a grammar to investigate how conversations develop. Through positioning, specific local moral orders are constituted. Positioning Theory should not be regarded as a kind of ‘general theory’ that can be applied to several specific

subject matters. Rather, it should be seen as a starting point for reflecting upon the many different aspects of the social realm. If the species-wide and history-long ongoing conversation between people can be regarded as a labyrinth network, Positioning Theory offers a possibility to shift from the perspective of *maze traders*, those who are within the labyrinth, to a perspective of *maze viewers*, those who can see the labyrinth from above (Van Langenhove and Harré, 1999, p. 13).

### **2.3. Applying the Positioning Theory perspective to Strategic Communication**

Positioning Theory can be used as a framework to study all aspects of the social realm by focusing upon the linguistic interactions that are associated with the object of study. The first step is to record and transcribe conversations as they occur in a given setting or to collect written documents related to the issue to be studied. Next comes a triple iterative analysis of the data. In line with Positioning Theory, this can be done as follows: one begins with focusing upon the speech-acts with the aim of categorizing them according to the role they play in that given setting. For instance, in the case of a teaching situation, one can distinguish between speech-acts that present knowledge, that aim to trigger questions, or that evaluate the performance of students etcetera. Secondly, one can try to categorise the different storylines developed in the conversation. In a teaching context, for example, teaching can be for instance a 'let's solve this together' storyline or a 'this class is useless' storyline. Finally, and most importantly, one can focus upon the different positions that are taken and given in the situation. Teachers can position pupils in different ways, and pupils position their teachers. But the picture is more complex. Van Langenhove and Harré (1999) offer different analytic distinctions, such as the ones between deliberative and forced positioning, to fine-tune the analysis. A triple analysis of conversations like this allows for the mapping of any given situation:

1. The positions evoked by and attributed to and by the different actors involved;
2. The unfolding story-lines that are developed; and
3. The attribution of sets of right and duties to the different positions.

Melanie James (2014) has demonstrated how this can be put into practice by developing a conceptual framework for intentional positioning in Public Relations activities. The interesting thing about this framework is that it leads to two tools: one for scaffolding research and one for program planning. As such, that framework can assist researchers in analysing reality as well as guiding practitioners to consider strategic aspects of their practice. James' (2014) framework adds three specific domains to the original *positioning triangle*: the *positioning goal* domain, the *positioning type* domain and the *strategic pre-positioning* domain. Together, these four domains form a tool to scaffold research and analysis. As will be argued in the next section, this framework can be used to look at Science Diplomacy policies and practices in a much more granular way than has been the case so far.

### **3. Science Diplomacy as strategic positioning**

Using the James (2014) framework for intentional positioning in public relations, a similar framework can be developed for Science Diplomacy. Intentional positioning as Science Diplomacy could be seen to be about how actors such as governmental organizations use words (and discourses of all types) to locate themselves and others in particular ways, in order to achieve specific outcomes. Inspired by James' (2014, p. 206) definition of a public relations position, one can say that a Science Diplomacy Position is:

A point of intentional representation discursively constructed for the purposes of achieving an intended outcome, and from where possibilities for action are established, or in some cases denied, in terms of the local moral order/s wherein the Science Diplomacy activity is taking place. Positioning is comprised of those actions taken to achieve the position.

The first dimension of this framework is the '*positioning goal domain*' that focuses upon the intentional positioning related to a desire to achieve a specific goal. From a research perspective, determining the underlying positioning goal of past or current communication practice may be the very point of undertaking a positioning analysis. The goal may not be

immediately apparent and it is through the close analysis of the texts and context of the positioning episode that goals can be identified. This is about finding the reasons (both as stated objectives and as unspoken motives) why a stakeholder mentions 'Science Diplomacy' in its communications. It allows Science Diplomacy to be applied to the broader context of the changing nature of relations between science and society.

The second dimension of the framework is the 'positioning type domain', used to untangle the intentional positioning into the four distinct types as identified by Van Langenhove and Harré (1999), namely:

- situations of deliberate self-positioning: here one has to look for stakeholders that aim to position themselves as an actor in Science Diplomacy
- situations of forced self-positioning: here forces outside an organisation's immediate control necessitate to position itself as a Science Diplomacy actor.
- situations of deliberate positioning of others: this is about stakeholders that deliberately position other actors as a 'Science Diplomacy' actor.
- situations of forced positioning of others, where forces outside an actor's immediate control necessitate the actor's positioning of other actors as being a 'Science Diplomacy' actors.

This domain of the framework considers the intentional positioning aims to be achieved. This domain is central to the purposive construction of meaning with the strategic intention of an organization achieving its goals. Following such an analysis, one can determine whether a positioning as a Science Diplomacy actor is being undertaken proactively or defensively. It facilitates the examination of the actor's power to position itself and others and also the positioning power being wielded by external entities.

Thirdly, there is the '*strategic pre-positioning domain*' that Moghaddam and Harré (2010) regard as the first phase of the positioning act that is the a priori attribution of qualities of character to the positioned persons or entities. This domain of the framework considers the

intentional positioning aims to be achieved. It is central to the purposive construction of meaning with the strategic intention of an actor achieving its goals. This first phase involves the attribution of qualities of the actor in question. In the second phase, the person is assigned or refused a cluster of rights and duties to perform certain kinds of acts, thus constraining what someone, so positioned, can rightly do and say. If this thinking is followed through to its logical conclusion, a governmental agency that decides to occupy a particular position on Science Diplomacy, does so because it expects that this is viewed as positive by the society within which it operates. As such it would have to act in a way that enacted and supported the desired position. This would then lead to a positive change in the agency and the wider society. Thus, there is the potential for a positioning approach to science diplomacy, although highly strategic, to drive positive and ethical behavior by governmental agencies.

Both phases presume the existence of a local moral order. The above is thus underpinned by the presumption that there is “a cluster of collectively located beliefs about what it is right and good to do and say” (Moghaddam and Harré, 2010: 10), that is a local moral order. The analysis of references to Science Diplomacy within a positioning theoretical context can indicate why what may have worked for an agency in one context, culture or country doesn’t work in others. This is because the local moral orders differ and this requires a rethink in some instances of what it is right and good to do and say.

#### **4. Some preliminary conclusions**

The above outlined Positioning Theory framework can be used to look in detail at some recent cases of Science Diplomacy. In particular, it can shed light on how positions in Science Diplomacy are determined, how they are enacted and how they are supported through storylines. Based upon the author’s experience with Science Diplomacy in the context of the EL-CSID project, the following general and preliminary remarks can already be made:

4.1. Taking a Science Diplomacy position can either be done by governmental actors or scientific actors. As such, a distinction can be made between two praxes of Science Diplomacy: Science Diplomacy as a strategic communication by governmental actors and Science Diplomacy as a strategic communication of scientific organisations and individual scientists.

4.2. As for the *positioning goal domain*, the task ahead is to distinguish between what are the real and stated goals of the actors when they take a Science Diplomacy position. In many cases -, this will be state-interests, mainly in the economic sphere. But other goals are possible as well, such as contributing to peace-making and peace-building, contributing to development or contributing to solving global problems.

4.3. Within the *positioning type domain*, one can look at cases where the main actors are national (or subnational) governmental actors, such as ministries of science policy or state funding agencies for research as well as ministries of Foreign affairs. The main position taken by these actors is that they want to be facilitators or funders of what they qualify as Science Diplomacy. This can be accompanied by taking the position of seeing themselves as a soft power actor. Taking this self-position implies that scientists are positioned as having the potential to positively interfere in the Foreign Policy or the state. An interesting topic for further study will be how scientists respond to this forced positioning. It also implies that regular diplomats are positioned as having to interact with scientists and, for instance, support scientists abroad. Also, diplomats can be positioned as actors that need to gather intelligence about S&T developments in other countries. In the case of Science Diplomacy as a strategic communication of scientists, this involves situations where scientific organisations position themselves as actors that want to influence world politics and Foreign Policy. This will again trigger positions to be taken by governmental actors.

4.4. Across the above type and goal domains, the positions identified need to be linked to the storylines that the actors have chosen to make their case. Often this occurs by referring to historical quotes or to stereotyped conceptions of qualities of science and scientists. For instance, Louis Pasteur is often mentioned as having declared that science knows no country, because knowledge belongs to humanity... other storylines include the idea that

science is a universal language or that the republic of science preempts the 'ideal society'. In a recent article published by the editors of the Scientific American (2017) it was argued that "partnering across borders means faster discovery and a safer world" as well as "research depends on ideas shared across political borders – including countries in conflict" (n.p).

4.5. The final aspect of a Positioning Theory analysis of Science Diplomacy is to map the moral orders that are generated by the speech-acts related to the positions taken and the storylines shared. It would be interesting to explore within which moral order Science Diplomacy could be, especially in terms of Rights and Duties for both scientists and policymakers. It is clear that there are several Moral Orders involved in Science Diplomacy: the moral order of diplomacy and Foreign Affairs, that of the science and research community involved and finally, the moral order of a local praxis labeled as Science Diplomacy.

In many instances, the use of the term Science Diplomacy by policymakers gives them the right to think instrumentally about RTD in terms of contribution to the state interests, in particular their foreign affairs or international relations. Science Diplomacy then becomes a tool and a rationale in the broader context of the science society social contract. Using the concept of Science Diplomacy, policy-makers can give themselves the right to demand from scientists to take up 'diplomatic roles', Such demands could be contested by the scientists as was, for instance, the case with a Spanish scientist, Moro-Martin (2017) who published an opinion-piece in Nature, with the title "How dare you call us diplomats?". A positioning analysis can also include a mapping of the duties related to positioning. An obvious duty for policy-makers would be to set aside the necessary resources for Science Diplomacy activities. On the other hand, policy-makers will also have the duty to accept the moral order of science with its own values and ideals.

As for scientists, engaging in Science Diplomacy will bring its own rights and duties. This boils down to accepting that if there is a contractual relation for a Science Diplomacy project this will be performed in good faith for the diplomatic goals of the project. In other words, Science Diplomacy resources should not only be used for scientific goals.



The above, illustrates that taking the Positioning Theory perspective when looking at Science Diplomacy policies and practices, allows for a much more precision in describing and analyzing cases. This has three main implications. First, it allows for the comparison of different cases while using the same analytical language. This is a necessary condition for any attempt to develop a general approach to Science Diplomacy. Secondly, it paves the way for developing awareness and capacity-building training courses for stakeholders involved in Science Diplomacy. Thirdly, it could be applied practically to the design of positioning plans and strategies for actors involved in Science Diplomacy. Finally, it is posited that taking the Positioning Theory perspective holds the promise of developing a theory of Science Diplomacy.

## References

Berger, P., & Luckmann, T. (1966). The social construction of knowledge: A treatise in the sociology of knowledge. *Open Road Media: Soho, NY, USA*.

Bijker, W. (2017). Constructing Worlds: reflections in Science, Technology and Democracy (and a plea for Bold Modesty). *Engaging Science, Technology and Society*, (3), pp. 315-331.

Bush, V. (1945). *Science, the endless frontier: A report to the President*. US Government Print Office.

Davies, B. & Harré, R. (1990): Positioning: The Discursive Production of Selves. *Journal for the Theory of Social Behaviour*, vol. 20, no. 1.

Harré, R. (

Flink, T., & Schreiterer, U. (2010). Science diplomacy at the intersection of S&T policies and foreign affairs: toward a typology of national approaches. *Science and Public Policy*, 37(9), 665.

Moghaddam, F. and Harré, R. (2010) Words, conflicts and political processes. In F. Moghaddam and R. Harré (eds) *Words of Conflict, Words of War: How the language we use in political processes sparks fighting*. Santa Barbara, CA: Praeger.

Moghaddam, F. M., Harré, R., & Lee, N. (2008). Positioning and conflict: An introduction. In *Global conflict resolution through positioning analysis* (pp. 3-20). Springer New York.

Moro-Martín, A. (2017). How dare you call us diplomats. *Nature*, 543(7645), 289.

Obama, B. (2009). Text: Obama's Speech in Cairo. *The New York Times*, 4.

Editors (2017) Science Diplomacy Is More Vital Than Ever: Partnering across borders means faster discovery and a safer world. *Scientific American*. 1 June 2017. <https://www.scientificamerican.com/article/science-diplomacy-is-more-vital-than-ever/>

Searle, J. R. (1995). *The construction of social reality*. Simon and Schuster.

Slocum, N. and van Langenhove, L. (2003) Integration speak: introducing positioning theory in regional studies. In R. Harré and F. Moghaddam (eds) *The self and Others: Positioning individuals and groups in personal, political and cultural contexts*. London: Praeger, pp. 123–36.

Slocum-Bradley, N. (2008) Discursive production of conflict in Rwanda. In F. Moghaddam, R. Harré, and N. Lee, (eds) *Global Conflict Resolution through Positioning Analysis*. New York: Springer, pp. 20–26.

Slocum-Bradley, N. (2010) The positioning diamond: a transdisciplinary framework for discourse analysis. *Journal for The Theory of Social Behaviour*, 40(1): 79–107. doi: 10.1111/j.1468-5914.2009.00418.x

Swanson, W. (2012). Birth of a cold war vaccine, *Scientific American*, 306(4), pp. 66-69.

Turekian, V.C., Macindoe, S., Copeland, D., Davis, L.S., Patman, R.G. and Pozza, M. "The Emergence of Science Diplomacy." In Davis, L. S. and R. Patman (Eds.) *Science Diplomacy: New Day or False Dawn?* (Pp. 3–24). Hackensack, NJ: World Scientific Publishing, 2015. [http://dx.doi.org/10.1142/9789814440073\\_0001](http://dx.doi.org/10.1142/9789814440073_0001)

Van Langenhove, L. (2017) *Tools for an EU Science Diplomacy*, Publications Office of the European Union, Brussels, 34p.

Van Langenhove, L. and Harré, R. (1999) Introducing positioning theory. In R. Harré and L. van Langenhove (eds) *Positioning Theory: Moral contexts of intentional action*. Oxford: Blackwell, pp. 14–31.